REMARKS/ARGUMENTS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the amendments and remarks herewith, which place the application into condition for allowance. The present amendment is being made to facilitate prosecution of the application.

I.   STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 1, 3-5, 7-27 and 29-92 are in the application. Claims 1, 3-5, 7-27 and 29-52 are currently pending. Claims 53-92 were previously withdrawn without prejudice or disclaimer of subject matter.

Claim 6 is hereby canceled. Claims 1 and 27 are independent. Claims 1, 7 and 27 are hereby amended. No new matter has been introduced. Support for this amendment is provided throughout the Specification as originally filed.

Changes to the claims are not made for the purpose of patentability within the meaning of 35 U.S.C. §101, §102, §103, or §112. Rather, these changes are made simply for clarification and to round out the scope of protection to which Applicant is entitled.

II.   REJECTIONS UNDER 35 U.S.C. §103

Claims 1, 3-27, and 29-52 were rejected under 35 U.S.C. §103(a) as allegedly anticipated by U.S. Patent No. 5,598,216 to Lee in view of U.S. Patent No. 6,404,817 to Saha et al. (hereinafter merely "Saha") and U.S. Patent No. 5,978,817 to Jung et al. (hereinafter merely "Jung").

Applicant respectfully traverses this rejection.

First, independent claim 1 is representative and recites, *inter alia*:

"calculating and extracting the block signature for the current block of high relevance as selected in a discrete-cosine-transform domain using at least a part of DCT-coefficients in a block"

That is, the present invention claims calculating the block relevance metric and selecting the blocks with the highest relevance in the compressed DCT domain. Specification page 22, lines 16-23 and FIG. 8, step S81. Moreover, claim 1 recites, "calculating and extracting the block signature for the current block of high relevance as selected in a discrete-cosine-transform domain using at least a part of DCT-coefficients in a block." That is, the present invention also performs block signature extraction for the selected blocks from the compressed DCT domain and calculates the block signatures in the DCT domain. The extraction and calculation in the DCT-domain was recited in claim 6, now canceled. Claim 27 recites a similar extraction and calculation in the PEL-domain.

The Office Action points to Lee (col. 4, line 63 to col. 5 line 5) for the calculating a block signature for the current block of high relevance as selected in the PEL-domain. However, Lee does not make that disclosure at the cited location or elsewhere. Lee does not disclose selection of the high relevance blocks in the compressed DCT domain and then extracting and calculating the block signatures of those selected blocks in the PEL-domain. Saha does not add the feature missing from Lee for the DCT domain. Indeed, at col. 2, lines 1-4, cited in the Office Action, Saha only mentions the MPEG standard using both motion compensation and DCT processes in picture compression. There is no suggestion of signature extraction and calculation in the DCT domain for blocks of high relevance selected in the compressed DCT domain.

Jung does not add the elements missing from Lee and Saha.

Independent claims 1 and 27 are patentable over Lee, Saha and Jung because those references taken alone or in combination do not disclose each and every element recited in the claims.

Second, independent claim 1 is representative and recites, *inter alia*:

"parsing said video/audio signals <u>in a compressed domain of the video/audio signals and extracting therefrom</u> motion vectors of said video/audio signals, DCT-coefficients and macroblock-type . . ." (Emphasis added).

The Office Action also points to Saha col. 10, lines 20-40 and FIG. 4 for this element. Applicant pointed out this is a misinterpretation of Saha in their October 5, 2006 reply to the Office Action mailed June 6, 2006. Applicant's argument is clarified herein below.

As understood by Applicant, Saha retrieves compressed video data, which is then subjected to a decoder that parses the video data and <u>performs decoding</u> to extract the macroblock header information, the motion vector information, and the DCT coefficient information. The motion vector information is used to retrieve and combine the reference image block with the image correction block to produce a decoded image block. There is no suggestion in Saha that the motion vectors, DCT-coefficients and macroblock-type are extracted from in the compressed domain of the video signal. The <u>implications</u> suggested in the "Note" on page 3 of the Office Action as to the function of Saha's block 404 are not a substitute for a disclosure in Saha of the elements recited in the claims. In Saha the values are extracted from the <u>decoded video signal</u> (*i.e*, in the PEL domain). Indeed, block 404 is discussed in Saha as decoding the

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bitstream. Col. 10, lines 20-27. That is, <u>Saha requires the time consuming decoding of the</u> <u>compressed domain video/audio bitstream.</u>

In contrast, the present invention extracts the feature points in the compressed domain. Claim 1 recites, "parsing said video/audio signals <u>in a compressed domain of the video/audio</u> <u>signals and extracting therefrom</u> motion vectors of said video/audio signals, DCT-coefficients and macroblock-type."

The supplied video/audio signal has image values (feature values) where there is useful information. The DCT of the supplied video/audio signal comprises DCT blocks each having a particular value derived from the supplied video/audio signal. Feature points are DCT blocks that satisfy the mathematical definition disclosed in the as-filed specification at page 24, line 9 to page 25, line 17.

The present application tracks feature blocks in the <u>compressed (DCT) domain,</u> not the real (PEL) domain as disclosed in Lee, Saha and Jung. Thus, claim 1 recites, "parsing said video/audio signals <u>in a compressed domain of the video/audio signals and extracting therefrom</u> . . ." The present application uses, for example, the already MPEG-compressed data to track feature points. The present application has the advantage of avoiding the step of looking for feature points in a far more heavily populated data space, that is, the real domain.

Claim 1 is patentable over Lee, Jung and Saha because neither of those references taken alone or in combination teach nor suggest each and every limitation recited in the claim. In particular, the references do not disclose, "parsing said video/audio signals in a compressed domain of the video/audio signals and extracting therefrom motion vectors of said video/audio signals, DCT-coefficients and macroblock-type" as recited in claim 1.

For reasons similar or somewhat similar to those described above with regard to

independent claim 1, independent claim 27 is also believed to be patentable.

III. DEPENDENT CLAIMS

As stated above, the dependent claims depend from one of the claims discussed above

and are therefore believed patentable for at least the same reasons. Because each dependent

claim is also deemed to define an additional aspect of the invention, however, the individual

reconsideration of the patentability of each on its own merits is respectfully requested.

CONCLUSION

Claims 1, 3-5, 7-27 and 29-52 are in condition for allowance. In the event the Examiner

disagrees with any of statements appearing above with respect to the disclosure in the cited

reference, or references, it is respectfully requested that the Examiner specifically indicate those

portions of the reference, or references, providing the basis for a contrary view.

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In view of the foregoing amendments and remarks, it is believed that all of the claims in this application are patentable and Applicant respectfully requests early passage to issue of the present application.

Respectfully submitted,

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